

REMARKS

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli, U.S. Patent 5,317,170, in view of Duveneck et al., U.S. Patent 6,469,785 (hereinafter "Duveneck") and further in view of Nurmikko et al., U.S. Patent 6,233,267 (hereinafter "Nurmikko"). Applicants respectfully traverse the rejection. The Examiner states "neither Paoli or Duveneck teach that the surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy. In regard to claim 5, Nurmikko et al. does teach that the surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy as described in column 2, lines 1-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the material as taught by Nurmikko et al in the combination of Paoli in view of Duveneck et al in order to provide for a light emitter capable of operating at different wavelengths." See office action, page 3. Applicants respectfully submit that a person of skill in the art would have no reason to expect that a III-nitride surface could be substituted for the GaAs n-contact layer 180 on which Paoli forms fresnel lenses 178. See generally Paoli column 12 lines 25-38. It is well known that III-nitride materials are grown at higher temperature than GaAs, and are more stable, harder materials. A person of skill in the art would expect that the more stable and hard a material, the more difficult it is to shape into a fresnel lens. Accordingly, a person of skill in the art would have no expectation that a fresnel lens could be formed in a III-nitride material by the techniques taught by Paoli and Duveneck. In addition, a III-nitride layer in Nurmikko's device cannot physically be substituted for the GaAs n-contact layer of Paoli, because none of Nurmikko's III-nitride layers are exposed, top layers, as is n-contact 180 layer on which Paoli forms fresnel lenses 178. In Nurmikko's device, the top, exposed layer is a dielectric mirror stack, not a III-

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nitride layer. For the above reasons, claim 5 is allowable over the combination of Paoli, Duveneck, and Nurmikko.

Claims 2, 3, 7-12, 23, 24, 27-30, 34, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck and further in view of Nurmikko.

Applicants respectfully traverse the rejection. Independent claims 3, 12, 27, 34, 41, and 42 recite forming or stamping a fresnel lens, holographic diffuser, or optical element on "one of an alloy comprising $(\text{Al}_x\text{Ga}_{1-x})_y\text{In}_{1-y}\text{P}$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy." These claims are thus allowable over Paoli, Duveneck, and Nurmikko for the same reason as claim 5, i.e. because a person of skill in the art would have no expectation of a successful combination of Paoli, Duveneck, and Nurmikko, and because Nurmikko cannot be physically combined with Paoli or Duveneck. Claims 2, 7-11, 23, 24, 28, 29, and 30 depend from these independent claims and are therefore allowable for at least the same reasons.

Claims 3, 10, 12, 13, 23, 24, 27, 34, 41 and 42 are rejected under U.S.C. 103(a) as being unpatentable over Yanagase et al., U.S. Patent 5,528,057 (hereinafter "Yanagase") in view of Nurmikko. Applicants respectfully traverse the rejection. Yanagase teaches "[r]eflecting lens layer 8 . . . can be formed as follows. A polymeric solvent can be applied to the surface of cap layer 7, and a negative mold of a given shape can be pressed into the solvent. The lenses can then be hardened in an isothermal vat to form reflecting lens layer 8." See column 4, lines 30-36. Applicants respectfully submit that a person of skill in the art would not expect such a procedure to successfully stamp one of Nurmikko's III-nitride layers. As described above, it is well known in the art that III-nitride layers are much harder and more stable than the III-As layers described in the background section of Yanagase. In addition, as described above, Nurmikko's device does not have an exposed, top III-nitride layer, thus it cannot physically be combined with Yanagase to result in a device as illustrated in Yanagase's cover figure, with a III-nitride layer as the layer in which lens 8 is formed.

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Claims 3, 12, 27, 34, 41, and 42 are thus allowable over Yanagase and Nurmikko. Claims 10, 13, 23, and 24 depend from these claims and are therefore allowable over Yanagase and Nurmikko for at least the same reason.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck, further in view of Nurmikko, and further in view of Kish et al., U.S. Patent 5,376,580. Applicants respectfully traverse the rejection. Claim 4 depends from claim 3. Kish is cited only to teach "forming is executed concurrently with a wafer-bonding process" and as such adds nothing to the deficiencies of Paoli, Duveneck, and Nurmikko with respect to claim 3. Claim 4 is thus allowable over Paoli, Duveneck, Nurmikko, and Kish et al. for at least the same reason claim 3 is allowable over Paoli, Duveneck, and Nurmikko.

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck, further in view of Nurmikko, and further in view of Fogarty, U.S. Patent 5,141,677. Applicants respectfully traverse the rejection. Claims 31-33 depend from claim 27. Fogarty is cited as teaching "said stamping is executed at an elevated temperature," and as such adds nothing to the deficiencies of Paoli, Duveneck, and Nurmikko with respect to claim 27, as described above. Claims 31-33 are thus allowable over the combination of Paoli, Duveneck, Nurmikko, and Fogarty for at least the same reason claim 27 is allowable over Paoli, Duveneck, and Nurmikko.

Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck, further in view of Nurmikko, and further in view of Tomomura et al., U.S. Patent 4,988,579. Applicants respectfully traverse the rejection. Claims 43 and 44 recite "wherein the stamped surface is one of an alloy comprising $(Al_xGa_{1-x})_yIn_{1-y}P$ where $0 \leq x \leq 1$ and $0 \leq y \leq 1$ and a III-nitride alloy" and as such are allowable over Paoli, Duveneck, and Nurmikko for the same reasons as claim 5, described above. Tomomura is cited as teaching a display device and adds nothing to the deficiencies of Paoli, Duveneck,

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and Nurmikko with regard to the claim element quoted above. Claims 43 and 44 are thus allowable over Paoli, Duveneck, Nurmikko, and Tomomura.

Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli in view of Duveneck, Nurmikko, and further in view of Calveley, U.S. Patent 6,165,911. Claims 53 and 54 depend from claims 3 and 27. Calveley is cited as teaching stamping block materials and adds nothing to the deficiencies of Paoli, Duveneck, and Nurmikko with respect to claims 3 and 27. Claims 53 and 54 are thus allowable over Paoli, Duveneck, Nurmikko, and Calveley.

Applicants thank the Examiner for allowing claims 45-57 and 50-52.

In view of the above arguments, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

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